



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,671	10/16/2003	Monica M. Marugan	GEPL.P-077	2670
21121	7590	05/09/2005	EXAMINER	
OPPEDAHL AND LARSON LLP P O BOX 5068 DILLON, CO 80435-5068			ZIMMER, MARC S	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,671

Applicant(s)

MARUGAN ET AL.

Examiner

Marc S. Zimmer

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-30 and 35-60 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that these claims fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed March 23, 2005. In that paper, applicant refers often to their tables when arguing the obviousness of their invention. According to the description accompanying the tables, and in particular Tables 3 and 5, a desired result is 0.9 or greater for the probability of a first time pass, or p(FTP), in the UL 94 test. In Applicant's response, formulations 13 and 20 are stated to have exhibited adequate performance, ostensibly because the p(FTP) was above 0.9 in these cases. Formulations 18 and 19, on the other hand, have a p(FTP) of substantially less than 0.9 yet the amounts of siloxane contributed by the PC-PS copolymer and the amount of TiO₂ are within the ranges stipulated by these claims. Further, the amount of siloxane in formulation 13 is $0.2(12) = 2.4$ (the siloxane is 20% by weight of the copolymer according to the paragraph 61), which is outside the claimed range, yet Applicant seems to regard this composition as exemplary of their invention. Clarification is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1712

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 12-17, 20-22, 29-36, 39-41, 48-50-53, 56-58, and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura et al., U.S. Patent # 5,451,632. See the correspondence dated December 17, 2004 for a more comprehensive description of the anticipatory subject matter disclosed by the reference.

The Examiner had previously rejected these claims and others under 102/103 reasoning that, where other materials aside from those corresponding to (a), (b), and (c) of claim 1 were present, the limitation that the siloxane contribute 3% by weight, as a percentage of the total, was not explicitly satisfied by the reference. It is now the Examiner's position that this limitation is, in fact, anticipated.

It is appreciated that column 10, lines 40-56 only teaches the amount of siloxane present where the copolymer is one of only two components. However, it is now the Examiner's position that the skilled artisan will understand that this same level of siloxane content (0.02 to 8% by weight) is to be maintained no matter what other materials are present, the reason being that mechanical strength, flame resistance, and heat resistance, are deleteriously affected when the siloxane content is outside of the recited range.

One aspect that the Examiner did not sufficiently address before was the limitation that the TiO_2 in a mixture of polycarbonate, polycarbonate-siloxane copolymer and TiO_2 represents only 1 to 2.5 by weight of the composition. Comparable amounts are disclosed in the table 1D which outlines the weight distribution of compositions

Art Unit: 1712

comprising the copolymer and pigment. The skilled artisan will recognize similar quantities of pigment are to be used when a fraction of the copolymer is replaced with polycarbonate homopolymer. Polycarbonate/polycarbonate-polysiloxane mixtures are disclosed in Table 1B wherein the homopolymer comprises anywhere between 20 and 95% by weight of the mixture.

In summary, compositions resembling the claimed compositions are suggested by the fact that column 15, lines 40-44 mentions polycarbonate/siloxane molded articles also containing various embodiments of (B) among which include the homopolymer and pigment and by the fact that overlapping quantities of pigment, siloxane, and homopolymer (see claim 2) are suggested by individual examples of which the anticipatory invention is an amalgam. (The Examiner sees no reason why, when combining mixtures of polysiloxane-polycarbonate and polycarbonate with mixtures of polysiloxane-polycarbonate and titanium dioxide, the recommended amounts of each should be substantially changed. Indeed, there is no discernable reason that the skilled artisan would be motivated to, for example, significantly increase the amount of pigment used in a blend of polycarbonate-polysiloxane and polycarbonate when the amount used in the polycarbonate-polysiloxane alone was 1% by weight.)

As for claims 4-6, 29-30, 51-52, and 59-60, the reference discloses a number of styrenic resins having different properties that impart different effects to the composition depending what monomer(s) styrene has been copolymerized with. Concerning claims 4-5 and 51-52, the reference discloses high-impact polystyrene (column 13, lines 10-35) including SBS and ABS that will inherently convey impact resistance to a bulk polymer

Art Unit: 1712

composition to which they have been added. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established." The reference recommends that between 5 and 70% of the styrenic resin be added (column 14, lines 41-47).

Likewise, the reference also teaches styrene-acrylonitrile in the same passage which, of course, is inherently thermoplastic given that it shares an identical chemical makeup with the embodiment disclosed in claim 60.

As for 31-32, this rating is inherently satisfied in view of the similar chemical constitutions of the claimed article and that which is suggested by the reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

As for claims 33-36, 39-41, and 47, the reference does not expressly teach molded articles thicker than 1.6 mm. Nonetheless, there does not appear to be any

Art Unit: 1712

criticality attached to this parameter. Moreover, the skilled artisan will appreciate that similar fire-resistance ratings would inherently be realized for panels exceeding 1.6 mm in thickness given that the composition disclosed by the reference is similarly constituted.

Response to Arguments

Applicant's arguments against anticipation focus on the fact that the reference teaches only adding a silicone oil for improvement of dispersion. In this connection, Applicant states that the oil **could** be added as a separate component. While this may be true, it is of no consequence to the rejection. First, many of the claims are directed to a composition/product where there is no indication as to when the dispersing agent and titanium dioxide are combined. Indeed, the colorant could be coated before its incorporation into the composition or coated *in situ*. (In order for the oil to behave as a dispersant, it must somehow be coated onto the pigment particles.) Additionally, there seems to be an admission of Applicant's part that the skilled artisan would know that coating may take place before, or during, blending of the polymers and pigment as it is stated that the oil could be added as a separate material.

Most arguments against the obviousness of the claimed invention are rendered moot for the time being as the Examiner has restated his rejections under 35 U.S.C. 102.

Allowable Subject Matter

Claims 8-11, 18-19, 23-28, 37-38, 42-47, and 54-55 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in

Art Unit: 1712

this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Marc Zimmer
AU 1712